



Architectural Technology Program Standard

The approved program standard for Architectural Technology programs of instruction leading to an Ontario College Advanced Diploma delivered by Ontario Colleges of Applied Arts and Technology. (MTCU funding code 60600)

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Introduction

This document is the Program Standard for the Architectural Technology programs of instruction leading to an Ontario College Advanced Diploma delivered by Ontario Colleges of Applied Arts and Technology (MTCU funding code 60600).

Development of system-wide program standards

In 1993, the Government of Ontario initiated program standards development with the objectives of bringing a greater degree of consistency to college programming offered across the province, broadening the focus of college programs to ensure graduates have the skills to be flexible and to continue to learn and adapt, and providing public accountability for the quality and relevance of college programs.

The Program Standards Unit of the Ministry of Colleges and Universities has responsibility for the development, review and approval of system-wide standards for programs of instruction at Ontario Colleges of Applied Arts and Technology.

Program standards

Program standards apply to all similar programs of instruction offered by Colleges of Applied Arts and Technology across the province of Ontario. Each program standard for a postsecondary program includes the following elements:

- [Vocational standard](#) (the vocationally specific learning outcomes which apply to the program of instruction in question),
- [Essential employability skills](#) (the essential employability skills learning outcomes which apply to all programs of instruction); and
- [General education requirement](#) (the requirement for general education in postsecondary programs of instruction).

Collectively, these elements outline the essential skills and knowledge that a student must reliably demonstrate in order to graduate from the program.

Individual Colleges of Applied Arts and Technology offering the program of instruction determine the specific program structure, delivery methods and other curriculum matters to be used in assisting students to achieve the outcomes articulated in the standard. Individual colleges also determine whether additional local learning outcomes will be required to reflect specific local needs and/or interests.

The expression of program standards as vocational learning outcomes

Vocational learning outcomes represent culminating demonstrations of learning and achievement. They are not simply a listing of discrete skills, nor broad statements of knowledge and comprehension. In addition, vocational learning outcomes are interrelated and cannot be viewed in isolation from one another. As such, they should be viewed as a comprehensive whole. They describe performances that demonstrate that significant integrated learning by graduates of the program has been achieved and verified.

Expressing standards as vocational learning outcomes ensures consistency in the outcomes for program graduates, while leaving to the discretion of individual colleges, curriculum matters such as the specific program structure and delivery methods.

The presentation of the vocational learning outcomes

The **vocational learning outcome** statements set out the culminating demonstration of learning and achievement that the student must reliably demonstrate before graduation.

The **elements of the performance** for each outcome define and clarify the level and quality of performance necessary to meet the requirements of the vocational learning outcome. However, it is the performance of the vocational learning outcome itself on which students are evaluated. The elements of performance are indicators of the means by which the student may proceed to satisfactory performance of the vocational learning outcome. The elements of performance do not stand alone but rather in reference to the vocational learning outcome of which they form a part.

The development of a program standard

In establishing the standards development initiative, the Government determined that all postsecondary programs of instruction should include vocational skills coupled with a broader set of essential skills. This combination is considered critical to ensuring that college graduates have the skills required to be successful both upon graduation from the college program and throughout their working and personal lives.

A program standard is developed through a broad consultation process involving a range of stakeholders with a direct interest in the program area, including employers, professional associations, universities, secondary schools and program graduates working in the field, in addition to students, faculty and administrators at the colleges themselves. It represents a consensus of participating stakeholders on the essential learning that all program graduates should have achieved.

Updating the program standard

The Ministry of Colleges and Universities will undertake regular reviews of the vocational learning outcomes for this program to ensure that the Architectural Technology Program Standard remains appropriate and relevant to the needs of students and employers across the Province of Ontario. To confirm that this document is the most up-to-date release, please contact the [Ministry of Colleges and Universities](#).

Vocational standard

All graduates of Architectural Technology programs have achieved the [twelve vocational learning outcomes \(VLOs\)](#), in addition to achieving the essential employability outcomes and meeting the general education (GE) requirement.

Preamble

Graduates of the Architectural Technology program have acquired the knowledge, skills, and attitudes necessary to perform their functions. The vocational learning outcomes and their respective elements of performance are articulated to clearly define the range and level of skills, knowledge, and attitudes required to be successful as entry-level graduates of the architectural technology program.

Graduates collaborate with the building team in the design and construction phases of **building projects**. The graduate prepares architectural drawings and other graphical representations by applying principles and practices of **building science** to support the design and completion of **building projects**. Graduates contribute and collaborate in the administration of the construction phase. This work requires the implementation and use of current and emerging technologies to manage documentation and information that support the construction and design of **building projects**. Graduates engage in the implementation of sustainable and resilient design principles and practices in **building projects**. In addition, they propose technical solutions to manage environmental impacts. Finally graduates comply with legal, professional, and regulatory requirements as well as established building codes in the practice of building design and construction.

Graduates are prepared to assume responsibility for their work and may work independently or interdependently as part of an architectural or multidisciplinary **project team**. Also, graduates are prepared to contribute to the management of **building projects**.

For graduates of the Architectural Technology Program, there are employment and career opportunities in a variety of areas of Architectural, Engineering, Construction, and Building Operations (AECO) within industry, government, and public organizations. Graduates will be able to find careers in the design and construction of buildings such as: preparation of architectural drawings and documents; interpretation or preparation of building specifications; customer service field; private or municipal building inspection and regulation enforcement; estimating, quality management and production control; as well as management and supervision of **building projects**. With experience and ongoing professional development, graduates will be able to enhance their professional competence and expand their scope of work to maintain currency within the industry. Following a period of satisfactory performance in the workplace, the graduate of the Architectural Technology Program may approach a professional association for certification, accreditation, or licensing.

There may be opportunities for graduates to pursue further educational and occupational qualifications; through articulation agreements between the colleges, universities or professional organizations, graduates may be granted credits towards a degree or certification. Students should contact individual colleges for further details of a college's articulation agreements with other institutions or professional associations.

[See Glossary](#)

Note: The [Ontario Council on Articulation and Transfer](#) (ONCAT) maintains the provincial postsecondary credit transfer portal, [ONTransfer](#).

Synopsis of the vocational learning outcomes

Architectural Technology (Ontario College Advanced Diploma)

The graduate has reliably demonstrated the ability to:

1. communicate and collaborate with the **project team, project stakeholders**, and **authorities having jurisdiction** to support project delivery.
2. prepare, analyze, and revise drawings and other graphical representations to support the design and completion of **building projects**.
3. obtain, analyze, and prepare project documentation and specifications used for site planning, building design, and project execution.
4. prepare time, costs, and quantity estimates to contribute to a scheduling and tendering process.
5. propose technical solutions supported by principles of **building science** during the design and construction phases of **building projects**.
6. consult and collaborate with members of **professional disciplines**, such as structural, mechanical, and electrical building systems to confirm technical information.
7. collaborate in the development of building designs, for new and existing buildings, by analyzing project requirements.
8. comply with the legal, professional, and regulatory requirements, as well as established standards and current building codes, in the practice of building design and construction.
9. implement sustainable and resilient design principles and practices to manage impacts related to **building projects**.
10. implement and use current and emerging technologies to manage documents and information to support the construction and design of **building projects**.
11. contribute and collaborate in the administration of the construction phase of **building projects** by applying principles of project management.
12. develop strategies for professional development to enhance performance and maintain currency within the industry.

[See Glossary](#)

Note: The learning outcomes have been numbered as a point of reference; numbering

does not imply prioritization, sequencing, nor weighting of significance.

The vocational learning outcomes

1. The graduate has reliably demonstrated the ability to: communicate and collaborate with the **project team**, **project stakeholders**, and **authorities having jurisdiction** to support project delivery.

Elements of the performance

- a. Contribute to the preparation and writing of technical documentation according to the current building codes incorporating industry terminology, style, and format.
- b. Interpret and communicate technical project information with stakeholders, clients, contractors, and building professionals.
- c. Select and utilize appropriate communications technology in project development and delivery.
- d. Contribute and coordinate accurate and timely oral, written, and graphic communication with members of the building team (i.e., building team/professionals/Structural, Mechanical, and Engineering).
- e. Interact ethically to foster professional relationships demonstrating teamwork and self management skills.
- f. Report and present in oral, written, or graphic formats the results of project-related meetings.
- g. Assist in the writing, preparation, and evaluation of proposals and **contract documents**.
- h. Prepare, present, and defend technical reports.
- i. Collaborate in the consultation with various partners such as Indigenous Peoples and Nations as required.

[See Glossary](#)

2. The graduate has reliably demonstrated the ability to: prepare, analyze, and revise drawings and other graphical representations to support the design and completion of **building projects**.

Elements of the performance

- a. Manage graphical information for **building projects**.
- b. Produce design drawings, renderings, and other two-dimensional representations as well as three-dimensional representations in **building projects**.
- c. Produce working drawings and details in **building projects**.
- d. Prepare accurate and effective design drawings employing freehand, hard-line, and electronic drawing techniques.
- e. Apply current industry standards in the layout of drawings, and in the use of scales and drawing elements including graphic symbols.
- f. Read, analyze, and interpret architectural drawings in **building projects**.

[See Glossary](#)

3. The graduate has reliably demonstrated the ability to: obtain, analyze, and prepare project documentation and specifications used for site planning, building design, and project execution.

Elements of the performance

- a. Interpret and apply municipal, provincial, and federal codes and standards including prescriptive and performance-based criteria.
- b. Create specifications using standard formats, for example, the National Master Specifications (NMS) and other appropriate formats.
- c. Organize, write, and create technical documentation, such as reports, schedules, letters, and other project documentation.
- d. Assist in building products research.
- e. Read and apply survey, civil engineering, and geotechnical documentation.
- f. Use mechanical and/or electronic measuring instruments.
- g. Identify required site services related to the building location, orientation, and environmental factors.
- h. Identify relevant data sources and develop appropriate strategies for data collection.
- i. Coordinate the specifications prepared by building professionals.
- j. Coordinate specifications with **contract documents**.
- k. Assist in the analysis of proposed designs for social and environmental impacts.
- l. Assess site topography and recommend building location and orientation in consultation with various partners such as Indigenous Peoples and Nations as required.
- m. Recommend design solutions determined by parking, loading, vehicular, and pedestrian site circulation requirements.
- n. Apply applicable codes and zoning bylaws to determine maximum site coverage and to calculate building size.
- o. Assist in the preparation of site plans and documents for site plan control applications.
- p. Prepare site data in accordance with Ontario Building Code (OBC) Matrix.
- q. Assist in the site selection and design of a site grading plan.
- r. Assist in the preparation of landscape plans.
- s. Identify site inspection requirements.

[See Glossary](#)

4. The graduate has reliably demonstrated the ability to: prepare time, costs, and quantity estimates to contribute to a scheduling and tendering process.

Elements of the performance

- a. Use appropriate values, standards, handbooks, and pricing in preparing estimates at different design stages.
- b. Use current technology in the preparation of estimates.
- c. Participate in the preparation of cost estimates for labour and materials for **building projects**.
- d. Prepare quantity takeoffs and estimates in a **building project**.
- e. Assist in the preparation of tender documents by receiving, analyzing, and recommending contract award.
- f. Analyze and synthesize data from project documentation.
- g. Identify major architectural types and elements of construction contracts, including and not limited to Canadian Construction Document Committee (CCDC) documents.
- h. Assist in the review and preparation of contracts to ensure compliance with legal requirements and standards related to the tendering process.
- i. Participate in the planning, scheduling, and monitoring of **building projects** through the creation of required documents.

[See Glossary](#)

5. The graduate has reliably demonstrated the ability to: propose technical solutions supported by principles of **building science** during the design and construction phases of **building projects**.

Elements of the performance

- a. Identify and interpret appropriate sources of technical building information.
- b. Research, analyze, evaluate, and recommend building materials and construction practices.
- c. Solve architectural building detailing problems through the application of principles of **building science**.
- d. Prepare and recommend design solutions and construction details for **building envelope**, such as control of air infiltration, vapour movement, water migration, and heat transfer.
- e. Research, analyze, and prepare building details which apply principles of energy efficiency.
- f. Analyze technical solutions by using geometry, algebra, and trigonometry.
- g. Apply principles of statics and strength of materials in the development of **building projects**.
- h. Prepare and recommend design and details for fire safety, such as fire separations, smoke control, fire-rated closures, and unprotected openings.

[See Glossary](#)

6. The graduate has reliably demonstrated the ability to: consult and collaborate with members of **professional disciplines**, such as structural, mechanical, and electrical building systems to confirm technical information.

Elements of the performance

- a. Create construction details using a variety of materials in the design of structures, such as concrete, masonry, steel, and wood.
- b. Read, analyze, and integrate structural, mechanical, and electrical drawings in architectural design.
- c. Collaborate to ensure the coordination of technical information relevant to the design and specifications of building systems.
- d. Identify the specific roles and responsibilities of **professional disciplines** in the building process.
- e. Assist **professional disciplines**, such as structural, mechanical, electrical, and other specialty consultants engaged in the development of **building projects**.
- f. Apply basic knowledge of structural, mechanical, and electrical systems to collaborate with other building professionals.
- g. Participate as a member of a multidisciplinary team in the lifecycle of **building projects**.
- h. Interpret building systems drawings, specifications, codes, standards, and technical literature.
- i. Coordinate building systems documentation within the technical information resources of various **professional disciplines**.

[See Glossary](#)

7. The graduate has reliably demonstrated the ability to: collaborate in the development of building designs, for new and existing buildings, by analyzing project requirements.

Elements of the performance

- a. Apply principles of building design.
- b. Collaborate as a team member in the design of **building projects**.
- c. Apply accessible design principles during the development of **building projects**.
- d. Apply principles of sustainable design.
- e. Identify client's requirements related to building design.
- f. Participate in the assessment of existing buildings for the development of preservation, renovation, and repurposing projects.
- g. Perform measurements of buildings and prepare measured drawings.
- h. Inspect buildings and report building condition assessments.
- i. Evaluate local climate and geographical conditions for new and existing buildings as they relate to design criteria.
- j. Assess and define spatial and functional layout of a building and contribute to the development of conceptual design solutions.
- k. Apply principles of noise abatement, colour, and illumination theory to the design of building interiors.
- l. Assist in the interior design of residential, industrial, commercial, and institutional (ICI) buildings.

[See Glossary](#)

8. The graduate has reliably demonstrated the ability to: comply with the legal, professional, and regulatory requirements, as well as established standards and current building codes, in the practice of building design and construction.

Elements of the performance

- a. Apply knowledge of the [Ontario Building Code \(OBC\)](#) and provincial standards to **building projects**.
- b. Identify the rights and responsibilities of parties in **building projects**.
- c. Remain current with the legal and regulatory requirements in the architecture, engineering, and construction industry.
- d. Demonstrate respect for diversity, equality, and inclusionary practices in the work environment.
- e. Apply an ethical approach to resolve social and contractual issues that may occur when implementing **building projects**.
- f. Comply with local regulations, zoning by-laws, and municipal standards in **building projects**.
- g. Adhere to the legal requirements related to right-to practice.
- h. Apply and monitor best practices, safety codes, policies, and accident prevention procedures.
- i. Handle, store, and dispose hazardous materials safely in accordance with the Workplace Hazardous Materials Information System (WHMIS).
- j. Use Personal Protective Equipment (PPE) and wear appropriate clothing to ensure personal health and safety when required.
- k. Work in accordance with the [Occupational Health and Safety Act](#).
- l. Encourage and promote a culture of safety in the workplace.
- m. Inspect and ensure equipment and materials comply with best practice, safety standards, and regulations.

[See Glossary](#)

9. The graduate has reliably demonstrated the ability to: implement sustainable and resilient design principles and practices to manage impacts related to **building projects**.

Elements of the performance

- a. Research the environmental impact of **building projects** and recommend solutions to minimize the impact.
- b. Consider climate change and its implications to integrate resilient solutions in the design and construction of a building.
- c. Adhere to current legislative requirements for environmental protection that apply to **building projects**.
- d. Implement current energy and environmental design practices and certifications.
- e. Identify sustainable design and building practices applicable to the development of the project site.
- f. Analyze the technical performance of buildings using appropriate methodology, software, and equipment.
- g. Evaluate the results of studies and assessments that impact **building projects**.
- h. Identify and analyze economic, social, and environmental impacts of **building projects**.
- i. Identify and integrate principles of sustainability in the design, selection of building materials, and construction methods used in **building projects**.

[See Glossary](#)

10. The graduate has reliably demonstrated the ability to: implement and use current and emerging technologies to manage documents and information to support the construction and design of **building projects**.

Elements of the performance

- a. Develop and apply computer skills relevant to architectural practice, such as design, construction, and operations of **building projects**.
- b. Research and utilize building project information using digital technology (e.g., AutoCAD, Building Information Modelling (BIM), Revit, etc.).
- c. Manage electronic files for **building projects**.
- d. Manage and integrate data in **building projects**.
- e. Evaluate and apply current and emerging software used in **building projects**.

[See Glossary](#)

11. The graduate has reliably demonstrated the ability to: contribute and collaborate in the administration of the construction phase of **building projects** by applying principles of project management.

Elements of the performance

- a. Apply contract administration practices and procedures.
- b. Identify and participate in the preparation of contract administration documents.
- c. Participate in the planning, sequencing, phasing, and scheduling of work for **building projects**.
- d. Assist in developing a project schedule using project management tools such as Critical Path Method (CPM) or Gantt Charts.
- e. Assist in the preparation and processing of contract change documents and progress/final billings.
- f. Participate in the preparation of construction progress reports.
- g. Participate and report on building project meetings.
- h. Identify critical issues in the design and construction of **building projects** to develop risk management strategies.

[See Glossary](#)

12. The graduate has reliably demonstrated the ability to: develop strategies for professional development to enhance performance and maintain currency within the industry.

Elements of the performance

- a. Remain current within the Architecture, Engineering, Construction, and Building Operations (AECO) Industry.
- b. Utilize self-management techniques to achieve project goals.
- c. Recognize the need for self-evaluation and the importance of lifelong learning.
- d. Seek out and respond to constructive feedback to enhance work performance.
- e. Identify the roles and advantages of professional organizations and benefits of certification (e.g., Association of Architectural Technologists of Ontario (AATO), Ontario Association of Architects (OAA), Ontario Association of Certified Engineering Technicians and Technologists (OACETT), Building Official Certification etc.).
- f. Identify opportunities for entrepreneurship in the AECO Industry.
- g. Identify the elements of a basic business plan and conform to business practices.
- h. Identify business principles relevant to the development of **building projects**.

Glossary

Authorities having jurisdiction: a body having jurisdiction in certain matters of a public nature; a body having power under a statute to pass regulations to direct, specify, and govern elements or activities of construction projects such as safety, health, or standards of manufacture or installation; a government body responsible for the enforcement of any part of the building code, or the official or agency designated by that body to exercise such function (as per the National Building Code 2015).

[Adapted from Chapter 2.4, Building Regulations and Authorities Having Jurisdiction, Royal Architectural Institute of Canada,](#)

Building science: the collection of scientific knowledge that focuses on the analysis and control of physical phenomena affecting buildings, including detailed analysis of building materials, building envelope systems, and environmental controls.

Building envelope: consists of the collection of components that separate conditioned space from unconditioned space, the exterior air, or the ground, or that separate conditioned spaces intended to be conditioned to temperatures differing by more than 10°C at design conditions.

[Adapted from Division A Section 1.4.1.2, National Energy Code of Canada for Building 2017](#)

Building projects: changes to a property by constructing a new structure and/or renovating, altering, extending, or demolishing existing structures and site features.

Contract documents: all documentation (models, specifications; drawings, contracts; schedules; estimates; tenders) that bind an agreement between an owner and contractor for a project.

Professional disciplines: an organizational category that includes all specialties required to completely address all aspects of the development of a building project. It may include, without limitation, architecture, structural, mechanical, electrical, civil engineering, landscape architecture, interior design, fire protection, building code, security, audio/visual equipment, or costing professionals and specialists.

Project team: is a group of people responsible for executing the tasks and producing deliverables of a building project. It may include the Consultants (Architects, Engineers, Designers, and specialist consultants), Contractors, (Sub-contractors, Trades, Suppliers and Distributors) and other project stakeholders (owner, tenant, end-user).

Project stakeholders: a group or individual who has a vested interest in the project, such as the project team, community, end users, owners, and authorities.

Essential employability skills

All graduates of the Architectural Technology program of instruction must have reliably demonstrated the essential employability skills learning outcomes listed below, in addition to achieving the [vocational learning outcomes](#) and meeting the [general education requirement](#).

Context

Essential Employability Skills (EES) are skills that, regardless of a student's program or discipline, are critical for success in the workplace, in day-to-day living and for lifelong learning.

The teaching and attainment of these EES for students in, and graduates from, Ontario's Colleges of Applied Arts and Technology are anchored in a set of three fundamental assumptions:

- these skills are important for every adult to function successfully in society today;
- our colleges are well equipped and well positioned to prepare graduates with these skills;
- these skills are equally valuable for all graduates, regardless of the level of their credential, whether they pursue a career path, or they pursue further education.

Skill categories

To capture these skills, the following six categories define the essential areas where graduates must demonstrate skills and knowledge.

- Communication
- Numeracy
- Critical Thinking & Problem Solving
- Information Management
- Interpersonal
- Personal

Application and implementation

In each of the six skill categories, there are a number of defining skills, or sub skills, identified to further articulate the requisite skills identified in the main skill categories. The following chart illustrates the relationship between the skill categories, the defining skills within the categories and learning outcomes to be achieved by graduates from all postsecondary programs of instruction that lead to an Ontario College credential.

EES may be embedded in General Education or vocational courses or developed through discrete courses. However, these skills are developed, all graduates with Ontario College credentials must be able to reliably demonstrate the essential skills required in each of the six categories.

Skill category: communication

Defining skills

Skill areas to be demonstrated by graduates:

- reading
- writing
- speaking
- listening
- presenting
- visual literacy

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.
2. respond to written, spoken or visual messages in a manner that ensures effective communication.

Skill category: numeracy

Defining skills

Skill areas to be demonstrated by graduates:

- understanding and applying mathematical concepts and reasoning
- analyzing and using numerical data
- conceptualizing

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. execute mathematical operations accurately

Skill category: critical thinking and problem solving

Defining skills

Skill areas to be demonstrated by graduates:

- analyzing
- synthesizing
- evaluating
- decision making
- creative and innovative thinking

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. apply a systematic approach to solve problems.
2. use a variety of thinking skills to anticipate and solve problems.

Skill category: information management

Defining skills

Skill areas to be demonstrated by graduates:

- Gathering and managing information
- Selecting and using appropriate tools and technology for a task or a project
- Computer literacy
- Internet skills

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. locate, select, organize and document information using appropriate technology and information systems.
2. analyze, evaluate and apply relevant information from a variety of sources.

Skill category: interpersonal

Defining skills

Skill areas to be demonstrated by graduates:

- Teamwork
- Relationship management
- Conflict resolution
- Leadership
- Networking

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. show respect for the diverse opinions, values, belief systems and contributions of others.
2. interact with others in groups or teams in ways that contribute to effective working relationships and the achievement of goals.

Skill category: personal

Defining skills

Skill areas to be demonstrated by graduates:

- Managing self
- Managing change and being flexible and adaptable
- Engaging in reflective practices
- Demonstrating personal responsibility

Learning outcomes

The graduate has reliably demonstrated the ability to:

1. manage the use of time and other resources to complete projects.
2. take responsibility for one's own actions, decisions and their consequences.

General education requirement

All graduates of the Architectural Technology program must have met the [general education requirement](#) described below, in addition to achieving the [vocational](#) and [essential employability skills](#) learning outcomes.

Requirement

The [General Education Requirement](#) for programs of instruction is stipulated in the [Credentials Framework](#) (Appendix A in the Minister's Binding Policy Directive Framework for Programs of Instruction).

In programs of instruction leading to either an Ontario College Diploma or an Ontario College Advanced Diploma, it is required that graduates have been engaged in learning that exposes them to at least one discipline outside their main field of study and increases their awareness of the society and culture in which they live and work. This will typically be accomplished by students taking 3 to 5 courses (or the equivalent) designed discretely and separately from vocational learning opportunities.

This general education learning would normally be delivered using a combination of required and elective processes.

Purpose

The purpose of General Education in the Ontario college system is to contribute to the development of citizens who are conscious of the diversity, complexity and richness of the human experience; who are able to establish meaning through this consciousness; and who, as a result, are able to contribute thoughtfully, creatively and positively to the society in which they live and work.

General Education strengthens students' essential employability skills, such as critical analysis, problem solving and communication, in the context of an exploration of topics with broad-based personal and/or societal importance.

Themes

The themes listed below will be used to provide direction to Ontario Colleges in the development and identification of courses that are designed to fulfil the General Education Requirement for programs of instructions.

Each theme provides a statement of Rationale and offers suggestions related to more specific topic areas that could be explored within each area. These suggestions are neither prescriptive nor exhaustive. They are included to provide guidance regarding the nature and scope of content that would be judged as meeting the intent and overall

goals of General Education.

Arts in society:

Rationale:

The capacity of a person to recognize and evaluate artistic and creative achievements is useful in many aspects of his/her life. Since artistic expression is a fundamentally human activity, which both reflects and anticipates developments in the larger culture, its study will enhance the student's cultural and self-awareness.

Content:

Courses in this area should provide students with an understanding of the importance of visual and creative arts in human affairs, of the artist's and writer's perceptions of the world and the means by which those perceptions are translated into the language of literature and artistic expression. They will also provide an appreciation of the aesthetic values used in examining works of art and possibly, a direct experience in expressing perceptions in an artistic medium.

Civic Life:

Rationale:

In order for individuals to live responsibly and to reach their potential as individuals and as citizens of society, they need to understand the patterns of human relationships that underlie the orderly interactions of a society's various structural units. Informed people will have knowledge of the meaning of civic life in relation to diverse communities at the local, national and global level and an awareness of international issues and the effects of these on Canada, as well as Canada's place in the international community.

Content:

Courses in this area should provide students with an understanding of the meaning of freedoms, rights and participation in community and public life, in addition to a working knowledge of the structure and function of various levels of government (municipal, provincial, national) in a Canadian and/or in an international context. They may also provide an historical understanding of major political issues affecting relations between the various levels of government in Canada and their constituents.

Social and cultural understanding:

Rationale:

Knowledge of the patterns and precedents of the past provide the means for a person to gain an awareness of his or her place in contemporary culture and society. In

addition to this awareness, students will acquire a sense of the main currents of their culture and that of other cultures over an extended period of time in order to link personal history to the broader study of culture.

Content:

Courses in this area are those that deal broadly with major social and cultural themes. These courses may also stress the nature and validity of historical evidence and the variety of historical interpretation of events. Courses will provide the students with a view and understanding of the impact of cultural, social, ethnic or linguistic characteristics.

Personal Understanding:

Rationale:

Educated people are equipped for life-long understanding and development of themselves as integrated physiological and psychological entities. They are aware of the ideal need to be fully functioning persons: mentally, physically, emotionally, socially, spiritually and vocationally.

Content:

Courses in this area will focus on understanding the individual: his or her evolution; situation; relationship with others; place in the environment and universe; achievements and problems; and his or her meaning and purpose. They will also allow students the opportunity to study institutionalized human social behaviour in a systematic way. Courses fulfilling this requirement may be oriented to the study of the individual within a variety of contexts.

Science and technology:

Rationale:

Matter and energy are universal concepts in science, forming a basis for understanding the interactions that occur in living and non-living systems in our universe. Study in this area provides an understanding of the behaviour of matter that provides a foundation for further scientific study and the creation of broader understanding about natural phenomena.

Similarly, the various applications and developments in the area of technology have an increasing impact on all aspects of human endeavour and have numerous social, economic and philosophical implications. For example, the operation of computers to process data at high speed has invoked an interaction between machines and the human mind that is unique in human history. This and other technological developments have a powerful impact on how we deal with many of the complex questions in our

society.

Content:

Courses in this area should stress scientific inquiry and deal with basic or fundamental questions of science rather than applied ones. They may be formulated from traditional basic courses in such areas of study as biology, chemistry, physics, astronomy, geology or agriculture. As well, courses related to understanding the role and functions of computers (e.g., data management and information processing) and assorted computer-related technologies should be offered in a non-applied manner to provide students with an opportunity to explore the impact of these concepts and practices on their lives.

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